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ABSTRACT

Some of the ways in which cable communications may affect society's ability to help individuals who, in one way or another, are less fortunate than most are explored. The services contemplated here include job training and placement, family counseling, rehabilitation, and home management assistance. The proposed audience would include those who are blind, deaf, crippled, elderly, very young, and/or poor. A model of a cable-based communication system for a metropolitan area of one million people demonstrates the types and amounts of social service such a system could deliver. The specific needs of each of the target populations for such service are explored in more detail. The economics of social service delivery by cable are discussed, and some of the important questions to be answered before developing such a system are raised. (JY)

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Cable Communications and Social Services

A Report Prepared for the
SLOAN COMMISSION ON CABLE COMMUNICATIONS

The opinions expressed herein are the views of the author and do not reflect necessarily the opinions of the members of the Sloan Commission on Cable Communications or of the Alfred P. Sloan Foundation.

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CABLE COMMUNICATIONS AND SOCIAL SERVICES

Introduction

The purpose of this paper is to explore some of the ways in which cable communications may affect society's ability to help individuals who, in one way or another, are less fortunate than most. Social services are intended to enable "disadvantaged" people to have a real chance to enjoy the quality of life that people who are not disadvantaged enjoy. People who are blind, who are deaf, who are crippled, who are very old and very young are disadvantaged in some sense compared to other members of society. And, poor people are disadvantaged. The constellation of their disadvantages generate problems and needs for such services as job training and placement, for family counseling, rehabilitation and home management assistance. Social services do not include health services, education services, or housing assistance. Most importantly, the social services to be considered in this paper do not include income maintenance; it is assumed that at some point in the new few years the federal government, and most of our cities and states will have separated the granting of direct financial aid from the delivery of social services.

Social services account for a relatively small part of a government's exponentionally rising "welfare" budget--ninety percent or more of welfare costs go to direct financial assistance (income maintenance) and payments for medical care.

Most social service occurs at fixed points, such as social service centers, youth counselling offices, etc. In this respect, social services are much more analogous to medical and education services than, say, to public safety or sanitation services. More than any other type of municipal service (except perhaps the mail service) education services and social services communication is the essence--not just peripheral to--of the function.

The vast majority of social service transactions are basically information exchanges. It is reasonable to expect that the increase in communication capacity afforded by the cable, and the accompanying reduction of cost would have a very great affect on an "industry" which is founded on information exchange. Furthermore, social services are characterized by their labor-intensity. With the inevitable increase in personnel costs, it is imperative that we consider ways in which the productivity of these personnel can be increased, and it seems reasonable that increasing the ability of each provider--case worker, say--to communicate would benefit his productivity.

Finally, we can expect that the increase in demand for social services which has been seen in recent years will continue, and the rate of increase may very well rise. The increase in demand reflects, to some extent, the effects of the disruptions experienced in family life, and in community life. There are more actual and potential drug addicts, more juvenile offenders, more families facing divorce, etc. The need for services is greatest among the poor, of course,

but other classes of society also have need for social services, though they most often procure and pay for them themselves. The ethic of our time approves one's seeking professional help, and it is reasonable to expect that more and more people will learn to recognize when they do need assistance, and will seek it from providers in the public and private sector.

It is reasonable to assume that most, if not all future cable communication franchises will specify that the franchisee will provide one or more channels for use by public authorities. New York City's franchise agreements for the borough of Manhattan call for three "city" channels. In addition, New York's franchise terms specify "public" channels which can be available--at low cost--to non-governmental social service providers.

How could cable communications affect the delivery of social services? Four areas of impact might be envisioned. The first is communicating with those who could use social services--providing information about what is available, and how to obtain it, as well as motivating the person receiving information to use it. The second, and perhaps most extensive use of communications is in providing information directly relevant to the solution of a person's interest, need, or problem. The third possible use of cable communications is in direct action to solve a problem--the issuing of a medicaid card, for example or arranging a job placement.

The final class of uses of communication is in the management (including operations and training) of the service function, whether it be public or private. Communication of data, documents,

video and audio, one way and two way are at least theoretically available to providers of social services once cable communication capacity has been established. This paper will present certain assumptions regarding the communications capacity which is likely to be available for most public and private social service providers.

The literature reveals little research on the role of telecommunications in social services, although there is, in fact, a reasonably long history of employment of telecommunications. The telephone certainly revolutionized delivery of services, and both radio and television have been used for years as means for general public education, as well as for promotion of specific services. Kenneth Clark directed a 1968 study for the National Association of Educational Broadcasters of "public benefit" programs. The findings, published in the Educational Broadcasting Review, listed over fifty programs, the majority of which could be considered of a social service nature. The impact of these programs, however, is by and large unknown. Certainly, the percentage of resources which have been devoted to communications and social services has been miniscule compared, with, say, personnel and general administrative costs.

This paper, then, will examine whether the cable offers a chance to radically increase the proportion of social service delivered by electronic communication, or aided by it, and what benefits and disadvantages we may expect from such innovations.

What are social services?

The term social services, and its companion term welfare are often used interchangeably. As noted earlier, the persistent trend of thinking of social science theorists, and the evolving policies of federal, state and local governments toward the needs of the poor are leading to a separation of "income maintenance", or public assistance from social services. As the term will be used in the discussion which follows, therefore, social services do not include the providing of financial payments to persons in need. What does this leave? The problem of definition is compounded by the fact that social services are closely related to other professional services, such as education and health. Indeed, to some extent, the profession of social work has arisen precisely because there are grey areas between the older helping professions--and because often persons who have problems need the aid of more than one of the traditional professions.
In a sense, therefore, social services are the services of the community which are "left out" of the services provided by doctors, teachers, lawyers, and other professionals.

Indeed a substantial part of social services consists not in directly solving problems or delivering services, but rather serving as a broker and advocate to arrange that persons who have needs are matched with the appropriate resources.

Social service agencies--both public and private--do directly provide some services. These include for example day care, recreation, care for the elderly and disabled. In addition workers in social services consider as part of their mission the organization and strengthening of the families and the communities in which they live, including aiding in the development of resources that are more responsive to the problems of the citizen. A great deal of the work of social service agencies is providing information to persons: information about resources available in the community, information on how to solve their own problems, and information of a professional counseling nature, directed specifically towards solving a person's problem.

Social services can also be seen in terms commonly used to describe the classes of health care: emergency, acute, and continuing.

An inventory of the social services available in any urban area would disclose that there were individuals, organizations, and institutions which were serving the community by providing such services as:

day care
counseling for children with problems
marriage and family counseling
addiction and alcoholism services
temporary homemaker services
job training and job placement activities
supportive services of a variety of types for the chronically ill and disabled citizens
programs for the elderly

Most of these agencies would also be devoting a substantial part of their resources to the brokering, arranging, and advocating services noted earlier which are needed to make the other institutions of the community more responsive to persons with problems.

Most of a public social service agency's professionals are considered to be "case workers". The term implies that a person, or family has presented one or more needs which the case worker has assumed responsibility to help solve. The case worker, in the ideal instance, becomes thoroughly familiar with all of the dimensions of the problem which might be relevant to the solution of the situation. For poor families in particular, the case worker becomes the gateway to services in the community. (Although when the concept is deliberately or accidentally distorted, the case worker can be the obstacle which delays or prevents a person receiving needed services.) Other professional social workers are involved in work with groups--groups of youths, for example--and in community organization activities.

A variety of types of facilities have evolved over the years which social services are available. The settlement houses served as a focal point for persons seeking assistances during the period of rapid urbanization in United States. Available there were a a variety of services including courses in homemaking, general counseling, recreation and referral. Their latter day descendants, often called Neighborhood Service Centers provide a similar array of services, although their orientation has changed drastically toward control by the community. Other institutions--which will later be seen as communications centers--

include day care and institutions for the elderly, employment offices, addiction treatment centers, and the social service units of large schools and hospitals and courts.

Operating in and out of these centers, a social worker professional, and her paraprofessional aides and administrative support structure are engaged in finding solutions to problems directly, advocating on behalf of the user with landlords, teachers, doctors, and other representatives of the "establishment". In the best cases, the social worker can give power to the powerless, as well as direct professional assistance.

The social worker is a diagnostician, helping the individual or the family discover what the real problem is, informing the persons of what solutions can be available, helping them evaluate alternative solutions, and arranging for providing the direct assistance needed to solve the problem.

The costs to the community of the social services available to it are extremely difficult to estimate. First because of the difficulty of defining what are social services. Many of the functions of social services are a kind of education service, and, conversely, oftentimes the guidance counselor in a school is performing what would have to be defined as a social service. Further complicating the task of estimating the annual expenditures of a community for social service is the fact that the service delivery systems are pluralistic; there is a great variety of private and public institutions involved in the delivery. Based on examination of budgets of a number of regions, it appears safe to estimate that

the total cost of social services is on the order of one third as much as is spent for school education, and about one quarter of the amount which the community spends for health services.

The following is the budget of a major social service organization, a city operated one, of a hypothetical large urban area.

		% of Total Budget
I Social Services (for the very young, very old, handicapped, unemployed, etc.)		
A. Personal services by Social Service Workers for Clients: interviewing and advising (person-to-person)	20%	
Referring, arranging and advocating (person-to-person, and person-to-data)	20%	
Performing (day-care teaching, home-aid, sensing the community environment, etc.)	30%	70%
B. Providing things:		
Shelter Food Transportation		
Use of training and rehabilitation facilities, sheltered workshops, etc.		20%
C. Administration and Management		10%

Thus it appears that at least half, and perhaps three-quarters or more of the social service functions are of a person-to-person and person-to-data communication nature.

The social worker and her colleagues, together with the resource which she is able to directly command, or to arrange for are often a vital cohesive force in the community--without it, the poor, especially, might be leading lives of much less quiet desparation.

In many instances, however, the nature and method of delivery of social services today leaves a great deal to be desired. From the point of view of the users, it is usual to expect delays, inaccurate information, frustration and unexpected absence of help when it is needed. In the case of public social service agencies, the provider seldom sees his role as a businessman would: selling a valued service to a market. Instead the attitude tends to be one of putting the user in the position of a supplicant.

Relatively little is spent by local social service organizations to do the kind of market research and "product" development which characterizes the efforts of service industries. The work remains highly labor intensive, with minimal use of technology to make service delivery more efficient and more effective.

Now is both an auspicious and hazardous time to introduce communication technology in a substantial way in the delivery of services. Factors which favor it include the fact that throughout the country social services are being separated from income maintenance services, and with so drastic a change in the organization of public social service organizations, the introduction of technology would, by itself, be more easily made than in a period of greater stability. On the other hand, as is always the case in a time of organizational crisis, new communication technology--

particularly if it is not thoughtfully designed and carefully implemented--can become the scapegoat for critics of the social service system both within and without.

There are two fundamentally different types of structures which deliver social services--one supported from public revenues, the other privately supported. The former, over the past twenty or thirty years have become much more important in terms of resources than the latter. The private social services include both general service functions (information and referral for example), and specialized services and institutions (homes for the elderly, rehabilitation facilities for the deaf, et cetera). Supported by church and private philanthropy and faced with rising costs, many are closing services and all are reexamining how they can use their resources better. Most large communities now have active interagency committees whose main function is to better coordinate the use of private resources, to avoid duplication, and to offer those services which seem singularly suited for delivery by privately supported organizations.

The public social service agencies are characterized by rapid growth, and in recent years, by a large infusion of federal funds. This is tending to increase the uniformity of standards of quality of service, and develop a greater sense of accountability for performance. Generally the interaction of the companion organization's interest in social services such as hospitals, schools, correctional institutions, et cetera, is informal and relatively ineffective. Perhaps the area of social service which is receiving

the greatest amount of inter-agency attention and cooperation is the one of drug addiction. The problem has elements of criminal justice, mental and physical health, job training and placement, and family counseling.

The Users of Social Services

Perhaps ten to 25 percent of the population of a community make use of the social service resources of the area at one time or another during the year. For the middle and upper classes, the need is usually of a general information nature, or an emergency situation. In our larger cities 20 to 40 percent of the residents are receiving some form of public assistance. They, the poor, are the greatest consumers of social services. The member of a poverty family who has a problem can't buy professional advice or care in the open market as can his more affluent fellow citizens; nor can he buy an exit from the physical environment which causes so many of the problems which he has. Life in the ghetto is a perilous existence, posing problems which threaten physical and mental survival. Furthermore, to a great extent, the ghetto resident is a foreigner in his own community. His little knowledge of what services could be available to him, how best to use them, and how to marshal his own limited resources to meet his needs. A great many of the "clients" of social services agencies who are poor bring complex problems and sets of problems requiring that the helper identify, obtain commitments, and monitor the provision of services to the client--a tremendous task. A case worker for a poor family will handle hundreds of transactions each year for that family, and it is common nowadays for a case worker to have responsibility for well over 50 cases at a time.

Throughout this discussion social services will be considered as taking place in an urban setting. It is in our large metropolitan areas that the greatest need for social services exists, and at the present time there are more available resources than in rural areas. Ultimately, if the types of ideas which are suggested in this paper regarding use of cable and other communication technology in the delivery of services prove practical, the central-area social service resources can be made far more accessible to residents of rural communities.

Trends and Emerging Concepts in Social Services

For several generations there has been a continuing, and accelerating rate of absorption by the state for responsibility to deliver social services. Federal institutions, such as the Veterans Administration, state and local agencies share with the towns and cities the major responsibility for providing help to those who need it to overcome temporary or chronic disadvantages and problems. This has led to the growth of a bureaucracy, and its accompanying paper work and red tape which, in the judgment of many, makes some types of social services less available and less responsive today than they were a generation ago. To counter this development, social planners are beginning to propose organization of social services in a manner which will bring their activities and their managements closer to the people who are being served. One branch of this development is a tendency in some state and city governments to decentralize responsibility for organizing and carrying out social services--even to the neighborhood level. Another expression of this philosophy of increased flexibility, responsiveness, and

accountability is to establish mechanisms whereby the public sector becomes the financer rather than the deliverer of services. Models of social service delivery systems of the future have been proposed which call for a greater amount of pluralism, with the underlying assumption being that a combination of various types of private social service institutions--including community corporations as well as traditional voluntary agencies--can deliver the services needed, with the public sector financier being responsible for major policy decisions, resource allocation, and performance monitoring. Such models imply a great increase in capacity of social systems to communicate with one another, and to facilitate flow of professional and management information in ways far different than those used today.

In the meantime the corps of people who are giving social services is undergoing change. There is an apparently ever increasing complexity of eligibility determination, and growing specialization of available services. The profession of social work itself is receiving increasing inputs from the scientific disciplines which contribute to it, requiring that the professional social worker be ever more skillful at identifying needs, analyzing causes, designing solutions, and executing or arranging for delivery of appropriate services. The caseworker, already notoriously overworked, is frustrated by the demand and the opportunity for more professionalism, while at the same time burdened by the increasing amount of paper work involved in administration of the professional work being done.

Two parallel developments which will affect the practice of social work and social service administration of the future are the

emergence of super-specialist social service professionals, and paraprofessionals. In every metropolitan area now, there are individuals who, through academic preparation and experience, are tremendously skillful at solving particular types of problems. These specialists need to be made much more widely available to the caseworker at the working level. While this has been occurring, in many social service agencies para-professional aides and assistants have been brought into the delivery system. Their training, assignments, and responsibilities vary enormously, even as they do in the other service fields where para-professionals are being introduced such as health care and education.

Their introduction into the system reflects a recognition of the fact that a substantial amount of the work conventionally done by professional case workers can be quite adequately performed by appropriately, briefly trained and supervised non-professional. At the same time the para-professional, if drawn from the community of those being served contributes an understanding and a sensitivity which can be of vital importance to successful matching of problem and resource. As in the case of increased use of super-specialists, proper use of para-professionals implies development of techniques of training and supervision which could benefit greatly from improved communication techniques.

Accompanying these structural and professional changes in social services, there are emerging new concepts and perceptions about what needs really are, and what help really consists of. Perhaps the greatest need is for more effective and efficient ways of

communicating with those who need help. To oversimplify, the customers for social services, especially those who are poor, are:

Unaware of how to state their needs in terms that are relevant to available resources

Apprehensive, even afraid to state their needs

Many, especially the poor, frustrated in the past by poor quality of service and by the general debilitating influences of their environment, lack the motivation to seek help.

For many families in the ghettos of our major cities, the experience of years, sometimes even of a couple of generations has included dependence upon a case worker for a variety of types of aids. As in any dependency relationship, there is resentment on the part of the dependent, and when the performance of the social worker, or of the service delivery resources which she attempts to bring to bear, are poorly carried out, this resentment takes the form of indignation. Among poor recipients of social services there is a growing sense that social services are a <u>right</u> even as access to reasonable-quality medical care, and family income are rights inherent in citizenship.

In many cases this development sensed, and often led by members of the social work profession is causing a substantial part of social work energies being directed at changing the conditions and the institutions which can cause and foster the growth of social problems. In the 1960's, stimulated by the philosophy and the resources provided by the war-on-poverty program,

a substantial part of "social service" resources were directed toward helping communities organize themselves into effective lobbies for change, and in apply pressures on the service delivery institutions to become more responsive. The "failure" of the crusade against poverty in the 1960's to make substantial changes in the physical and economic environment of those who are poor, has prompted a revival of the strength of those within the social service professions who maintain that the business of social services is to provide help to individuals and to families with specific professional assistance.

These are oversimplifications of the elements of the debate within the social service professions, and within society about the nature and role of social services of the future. There does seem, however, to be a single inevitable trend toward enabling the person with a problem to be much more in command than he is now of information about what solutions might exist within the community. One possible implication is that in the future all social services will be purchased. The "needy" who have the requirement for services but do not have income or savings sufficient to pay for them will receive vouchers permitting them to buy services from any qualified vendor.

This is bound to lead to the development of clearer concepts of performance monitoring and performance accounting. If the public social service organization becomes basically a provider of funds, and responsible to the legislature for an accounting of use of funds in terms of results achieved, there will be downward pressure upon

the suppliers of social services to plan and manage their activities with the same rigor. The upward pressure from the customers--who will perceive more and more in that they are, indeed, customers and not supplicants will lead to further clarification of concepts of quality and adequacy and effectiveness. From the point of view of the customer or user, benefits from this market-orientation can be substantial. From the point of view of public policy makers, the allocation of social service funds, the many competing demands can be made more rationally, and re-examined more often and thoroughly. Because so much of social services are in fact information transactions, it is altogether possible that communication links will tie together regional and even national social service resources--such as specialists, libraries of how-to-solve it video tapes, etc.--to enable a greater sharing and less duplication of resources.

All of this implies that present methods of communication at evey level of social service delivery must be vastly improved. The telephone has proven itself an invaluable tool in social service delivery, there has been limited use made of sounds and video tapes and films to present information normally conveyed on a person to person basis, and some social service agencies are beginning to make use of computers to enter and store case information, as well as to provide assistance to internal management. All of this has been primitive compared with the possibilities which are being offered with the advent of cable and peripheral technology. Looking at it from the broadest perspective, the person needing social service is in some way burdened with a problem which limits his freedom.

It may be a physical disability, it may be a learning handicap, it may be lack of knowledge of how to solve a chronic family disharmony. The cable, coupled with terminal devices (recorded video and audio information, digital input and display terminals, and a small class of special transducers to couple a person with a cable) can mean some increment in the person's freedom--in his capacity to grow and enhance the quality of his own life.

The Social Service Cable System

In exploring whether and how some types of social services might be brought to people remotely, let us consider the tools, the media which might be available. The most simple and inexpensive are the audio media--telephone and broadcast or cablecast audio information. The telephone, as a special case of cable service has the great merit of built-in switching and networking, providing random point-to-point access. By fairly simple (technically) modification the telephone can provide a caller with access to several other points simultaneously (conference calling). Additional peripheral equipment can give the user access to stored audio information (dial-a-prayer, dial-a-menu, etc.); further, fairly inexpensive addition to central-station hardware could give the caller quick access to one of thousands of recorded units of information. This last potential capability of the present telephone system is demonstrated now in the schools and colleges which have libraries of audio cassettes, any one of which can be dialed-up by a student from his room--operating rather like a tutorial juke box.

It is reasonable to assume that a combination of cable which has the qualities of one-point-to-many-points audio communication, and has inexpensive transmission charges (because of not having to amortize expensive switching capability), and telephone with random access point-to-point characteristics can serve as powerful complementary tools for social service providers.

Convential on-the-air commercial and public radio has been used by social service agencies for public education and other general-audience uses. It will continue to be useful for these purposes when its transmission medium becomes cable rather than air.

Audio transmission of social service information is much cheaper than video--by at least an order of magnitude now. The low cost of its terminal input, output and recording equipment and the economy of cable capacity it requires are in its favor in comparision with video communication. Yet there are occassions where the advantages of video which make it the medium of choice in many types of information--transfer situations. Others have presented analyses of the respective roles of audio--only and video in specific situations, particularly in the field of education.

There are two considerations, in particular which are important in video application in social service. The first in that social services are very often used by people to whom TV is an important component of daily experience--young children, mothers at home, and the elderly, for example. Secondly, is the capacity of video to convey non-verbal information--how-to-do-it demonstrations,

views of the environment and the non-verbal elements of personal communication.

Later in the discussion some of the types of uses of video will be presented which offer the promise of substantial improvement in the quality of many social services, and may permit giving some new types of services. Some of these depend upon the availability of two-way cable communication, with feedback via narrow-band digital or audio channels, or by video. Two-way video offers the same essential potential to social services as it does to health services. The important types of uses video-video communication in service delivery are its allowing the time-sharing of the knowledge of a specialist among many people at different locations. This potential for better resources allocation, and the ability of two-way video to allow remote groups to "meet" can significantly alter the nature and effectiveness of social services.

Ultimately "picture phone", providing random access video-video communication, coupled with cable will totally change our present view of what constitutes a social service need, and what type and structure of services are required to address those needs. Long before the time when every existing telephone will be replaced by a picture phone, however, cable technology, and a union of the social service professional with communication specialists will have built systems of service that are more responsive, appropriate and effective than we know today.

There will be blended with cable technology the products of several other engineering advances. The more important are:

1. Display and input terminals with associated computers to give a service user the same type of service information and automatic appointment-making (reservations) that an airline customer enjoys today
2. One half and one quarter inch video tape equipment
3. Dial-access audio and video cassettes
4. Scrambling and blocking to permit confidential video transmission and limited-group cable communication

Social Service Communications System

What might a cable-based communication system look like, if it were designed with social service needs as one of the design criteria? The configuration would mainly reflect the social service demand for channel capacity, including a considerable amount of two-way capability, and small amount of special-purpose terminal hardware, in addition to the data terminal equipment and display features for the social service information-referral-appointment function noted earlier.

The system for a metropolitan area of 1,000,000 people would provide:

- One-way conventional cable service to virtually all homes--with the subscription fee subsidized for low-income families

- The system has 40 channels. Five of them are dedicated primarily for social service use, thereby providing 840 hours each week for video information transfer
- All homes in the metropolitan area have telephones.
- There is a "head end" in each of 50 social service centers. These centers would include the following types--although not all service delivery centers of each type would have a head end:

  Neighborhood service center
  Day care center
  Institutions and day centers for the elderly
  Job placement and training centers
  Correctional institutions
  Foster-care institutions for children
  Addiction and alcoholism centers
  Mental health institutions and community mental health clinics
  Community corporations, and other community-controlled service units

- Many gathering-places in the community would be equipped with the video cassette players and television sets with libraries of cassettes on subjects relating to general information and preventive aspects of social services. Such gathering places might include laundramats, beauty parlors, shopping centers, etc.

. There are narrow-band video input devices in approximately 1,000 homes and work places (for use by the blind and other severly-disabled persons).

. Each service center--private and public--has a library of a few dozen video cassettes for use by clients, and is able to retreive from a central library any of several thousands cassettes for immediate transmission by cable, or for delayed transmission from the central library to the viewing center in early hours of the morning, for recording at the local center, and playback for the requestor later in the day. For lower-urgency cassette borrowing, messenger, and mail service are used.

. Ten thousand homes in the area have digital terminals provided for special needs of handicapped persons (including analog-to-digital converters for inserting certain types of physiological and other personal data, for use by persons receiving job training in an on-line mode, etc.)

. There is a computer-based information, referral and appointment system with terminals located at all service centers.

. There is inter-district, inter-city, and regional and national networking of cable systems.

. Scrambling devices are available for use in information transmission of a confidential nature.

The Wired Metropolitan Area

There are no two metropolitan areas with quite the same social service needs or resources. The general public policy toward providing services to those who need these varies markedly across the country. Levels of funding vary similarly, and the

allocation of funding any of the various types of service is inconsistent. The system for delivery service have evolved uniquely, in each area, by and large. Some types of services in one area one given largely by private voluntary institutions, in others, the service is assumed by the state, county, region or city. Advances in the science and art of social work administration, together with federal encouragement of greater uniformity and quality is evening out these local differences.

In order to put into perspective some of the illustrative application of a case cable-based social service communication system, we will construct a hypothetical major metropolitan area. Some simplifying assumptions will be made that are today quite unrealistic, but are suggestive of the nature and organization of resources available to give social service. The most important simplifying assumption is that there is true mutual planning and coordination among the various specialized parts of the public system, and with the private providers. The population of the metropolitan area can (as would be defined for a SMSA) is about 1,000,000 people. The central city has the concentration of poverty, disruptions, problems and needs characteristic of most core areas today. There is full separation of income maintenance (public assistance) from social services. In terms of social service needs, let the following serve as indicators:

Annual number of individual requests for information about service	250,000
Persons seeking employment at any one time through public placement agencies . .	30,000

Old persons needing some special services (including those in institutions, living alone, and living with family)	75,000
Blind, and those with other major handicaps and chronic illness (under 60 years old)	50,000
Pre-school children, and children of working mothers needing after-school care	75,000
Drug addicts	15,000
Annual requests for publicly-supported legal service	10,000
Transactions in which non-medical professional counseling is given regarding family and personal problems (beyond simply giving information on services available)	200,000 per yr.

The public and private resources available to those needing the service include day care centers, rehabilitation units, foster-care institutions and institutions for the chronically disabled and ill and the elderly as well as job training and placement centers. The organization of the social service delivery system follows generally the model proposed by Kahn[1]. In each community of about

[1] Kahn, Alfred - Theories and Practice of Social Planning 1969, Rusell Sage

5,000 families there is a Service Center. Each center facility and the services available on site follows a design reflecting the needs and resources available in the community. Regardless of the diversity of design, each center has an "intake module". The module consists of two parts. One is analogous to a catalog store of Sears or Penny's. The prospective "customer" describes his problem, need or interest to a non-professional. A branching questionnaire completed by the customer leads to identification of the specific type of information or service appropriate to his situation. The intake worker enters the code for the designated type of service into a terminal and retrieves detailed information about the service, including pictures of the facility providing the service, and names of previous users of the service who could be contacted for discussion of the nature and quality of the service.

Further, by cable or telephone an appointment could be made for the prospective customer. The appointment would be entered into the remote computer, and data inserted regarding billing arrangements and special data on the case entered for future follow-up.

The other half of the intake module would be staffed by a professional general-practitioner social worker. Her mission is to give general counseling, and emergency arranging and advocacy in the event of a crisis.

Given the communications system described how would it be used? Let us assume that the specific goal of the system is to improve the delivery of social service. The goal is to see that present types of services are done better/faster and economically, and that some people who cannot be served by the present delivery systems get service, and that new types of services presently too expensive, or technically unfeasible, are made available.

We must avoid giving the impression that social services can itself directly remove or cure some of the most profound problems which are faced by those who are most often in need of social service. The ghetto's slum housing, lack of jobs, poor education, inadequate health service cannot be solved by a communication system alone. As we point out labs, a social service communication system can help modestly by, for example, enabling family self-help, by making job training better and more available, by focusing the attention of the more affluent on the problem of the poor. Only a profound re-evaluation of public policy, and commitment to strategies that develop more family income and encourage public and provide capital investment will do the job. Cable based social services can do a better job toward improving the quality of help of those who need social service--both poor and non-poor, and that little bit may be of enormous value to the immediate beneficiaries, and may be one of the many steps needed toward helping all of us achieve the freedom to enjoy the rights defined in the Constitution as inalienable rights of citizenship.

What can Cable Do?

We will discuss application centered around cable (one and two way), but keep in mind the fact that video tape recording and telephone can be useful. We will consider only service delivery, assuming that by the time cable service is in demand, some form of income maintenance will exist.

Before discussing some of the specific examples of how cable (and accompanying information technology) can serve, let us begin by considering some of the conceptual opportunities which cable offers in getting to people the sound service they want, conveniently. Cable can be used to perform five functions by providing the right information at the right time in the right way to the right person. These functions are:

1. Actually solving a human problem or meeting a need. An example would be informing an unemployed man that there was a job opening suited to his skills and interests at a particular place.
2. Informing clients about public and private social services which are available to them, and motivating them to take advantage of the services.
3. Stimulating and guiding the present and potential users of services to collective self-help action.

4. Improving the quality of management information for the social service providers.
5. Informing all citizens of the social services being provided, of the nature and scale of the needs which are addressing.

What could this mean to the user and providers of social services, and to the public which pays for them (none now is self-supporting on the basis of user payments)?

. Cable-based social services can give the user the freedom to get information (stored and special-line) more conveniently, faster, more accurately, information which will help him define his needs in terms that are relevent to available resources, and how to use these resources and information to solve the problem he presented. It will lessen the "gatekeeper" role of the badly overworked social worker. It will begin to develop more of a marketing model of social services with the client (customer) determining (or playing a key role in determining) what his needs are, where he wants to get them met.

. It can make it easier for people with similar interests and problems, from different parts of the areas to "meet" without leaving the home, building non-geographic communities, helping people help one another and enlarge their lives by entering one or more communities-of-interest.

. Cable can eliminate the fatiguing and often humiliating experience of long waits, encounter with threatening forms, being told to go to one place, then another, then another before getting the service.

. It will be possible for the social worker, when appropriate, to "prescribe" specific cable cast programs and cassettes to help the person.

. It will facilitate the establishment of a modest computer-reservation system connecting all public and private service resource to enabling a help-seeker to retrieve from a central service call up from control video or audio verbal description of the services available and name of persons as references who have used the service recently. Automatic scheduling and follow-up could be made to determine what contact was made and what the outcome was.

. Use of cable can encourage, and strengthen the community's ability to directly attack, or to lobby for the means to attack the problem that can cause and intensify the need for social services--the problem of hard drug sale and use, housing, job, transportation, sanitation and crime.

. It will lessen the number of misassigned and "lost" cases who give up trying to get help.

. It may help and motivate some welfare recipients to become tax payers by giving more freedom to the blind, for example and reducing the need for hospitalizing or institutionalizing the chronically ill and elderly.

In sum, cable communication as the central nervous system of tomorrow's social service delivery has great meaning:

. for continuing help (the old, the disabled, the blind, the mother with insufficient income)

. for acute or occasional help (family counseling when a child is in trouble, job training, addiction)

. for emergency aid (evictions, family management when sudden death occurs)

From the point of view of the providers of social services, cable can:

. Spread scarcest resources more widely geographically

. Cut the time and money wasted handling inappropriately referred cased

. Make the provider more accountable to the client and the public for the nature and quality of the service given.

. Allow more use of para-professional in the information, referral, and advocacy roles

. Encourage pluralism among providers by giving the help-seeker information and bases for evaluating alternatives among the range of service

. Foster decentralized management of service organization

. A greater opportunity for professional staff continuing education, and access to current research and innovations in practice

. Permit the development and adoption of the "multi phasic screening" concept being adopted in health care to conserve scarce professional resources, and cut paper work and time in order to free the social worker to perform his professional service of counseling, advocacy and planning.

. Cable and related information technology may act as a stimulant to initiate other changes to make the entire social service system more effective and economical.

The greatest hazard is that cable communications and related technology be oversold--witness some of the substantial failures

which have occurred in applying technology in health services and education. In delivery of social services there must be human contact (while lessening the dependency relationship which now exists). Each application must provide a goal and an evaluation system in mind in order that the particular technical solution can continuously be compared with alternatives.

We have no solid theoretical or experimental basis for deciding what services are "more important now." Once cable becomes a utility for social service delivery, training and management, how will we determine whether more channel time and production funding should be spent on a service for elderly living along, for example, compared with job training or early childhood services? There need to be developed social services specialists analogous to the media specialists developing in the field of education, to help the provider decide on a media strategy for accomplishing a goal.

The problem of "producing" CTV and VTR "programs" of sufficient interest and equally to hold and motivate the viewer/participant is an extraordinary difficult one. Many of the people who will be viewing the instructional facet of the system are accustomed to watching several hours a day of commercial television, and taste regarding good and bad in quality TV has been shaped by the standard of high-budget TV.

Special purpose programming for social service delivery is going to require a combination of a knowledge of the viewer, a command of the most sophisticated arts of video production and a creativity that is very rare. Finally, the advertising and promotion of specific social service cable casting aimed at particular

sites in the community is going to require development of techniques and commitment of resources (for example, to "commercials" on the entertainment channels) which exceed the practice of social service agencies today.

Representative Uses of the Cable

Electronic communications media have been used in meeting needs of people for social services for many years, beginning with the telephone as a means for getting information and counsel, and proceeding to the use of the radio "talk show" programs as a way to make specialists and knowledgeable neighbors accessible to the person needing help. Public television has produced thousands of hours of "helping" programming. A citizen of a major urban area today can telephone a variety of sources for advice, he can watch and listen to several hours of a week of material broadcast to inform him of community issues, to give instructions in cooking and health-related information.

For the middle class citizen, who is able to buy the services he needs from the private sector (marriage counseling, preventive medicine, advice, job opportunities, etc), the existing programming is useful but not vital to him. When he needs a solution to a specific problem, he can generally get action.

For the poor family, present day "helping" video and radio programs is far from adequate. The head of a poor family has problems (rats, credit, lead paint poisoning) which he needs help in solving, and he doesn't have the money to pay the kind of professional help his suburban neighbor can command. Generally--and this is surprising--he has no idea of what free resources he could

make use of, or how to obtain them. Add to this the fact that a ghetto resident has not had enough help of family, schooling and friends in developing skills of home management--budgeting, food buying and cooking, sewing, child health care, etc.

The poor family's gateway to help is, generally, the family case worker is often young, trained in social work and incredibly overworked by demands of the administrative system and the needs of her fifty or more "cases". Since most of the service the families need are delivered by organizations which tend to be inefficiently managed, and outside of his control, logged follow-up is characteristic of his effort. Mistaken in referral are inevitable.

Consider the Kahn-type model of intake described earlier. It makes the client a "customer", he selects--with advice, if necessary--the service best suited to his need. Add to this model the possibility of a person being able to order information on any subject that he or she wants to know more about, and have it presented by video in terms relevant to the culture, environment of the community. The material would, in part, be generic enough to have been produced by an element of the Corporation for Public Broadcasting, or may be produced locally under sponsorship of a public or private social service agency, or community corporation.

The material could be presented by cable--and seen at home--or by a cassette player at the Service Center. The Human Resources Administration of the City of New York is considering preparing single-concept 1/2" video tape on subject in the following areas:

Consumer Education

How to shop

Where to shop

Truth and lending bill

Credit arrangements

Money management - budget

Legal Services

Rent

Separations/divorces

Where to go for service

Housing

Rent control

Landlord harrassment

Repairs

How to contact housing authority with complaints

Rats

Health and Medical Services

Forms

Public Assistance declaration

Unemployment

Voter registration

Ho pital

Apartment leases

Food stamps

Medicare/Medicaid

Household Hints & How To

How to decorate home cheaply

How to paint and hand wallpaper

Flower arrangement and plant care

How to launder clothes

How to make wall hangings

Cooking

Sewing - drapes, curtains, bedspreads, etc.

Sewing - children

Personal Grooming

In addition to these how-to-do-it video tapes, a "soap opera" has been proposed and is in the eary stage of design. The concept is to create a twice-weekly drama of the life of an extended family living in a ghetto and encountering the kinds of problems that characterize ghetto life. The drama will be didactic, intending to demonstrate how personal, family, neighborhood and community resources can be used to--sometimes--solve problems.

There is already an extensive library of tapes on subjects relating to learning and personal development available through the Educational Television Service.

It was assumed earlier that the cable systems permitted two-way video communication between any two of 50 centers in the metropolitan area. There is a great variety of uses of such a capability. Some examples are:

- Parents of some of the retarded children from southwest area gather in the head-end room of the Service

Center. Parents from the northwest area come to their Center accompanied by a specialist in child development. The two groups of parents, and, perhaps their children, meet via the cable, discuss problems and ideas. Viewers at home can watch both groups by a split screen, and, if one of the centers has conference-cable switching capability, several viewers at home can simultaneously join the discussion.

. With the addition of signal scrambling to prevent home TV sets from receiving the signal, addicts in one part of the area can meet with fellow addicts, or counselers elsewhere.

The hypothetical metropolitan area has Service Centers located in blue collar communities and suburban areas as weel as the ghetto. The ability of the two-way system to link any center with any other creates the possibility of building a great many viable communities-of-interest. Young disturbed people in surburbia and the ghetto share interests in music, sports and cars. Mothers with physical handicaps can learn homemaking tricks from one another--and perhaps become less dependent. The two-way video links among centers can be of value to virtually all groups having commom interests and problems, and the addition of the conference-call capability would allow persons unable to leave their home or institutions to "meet" specialists and fellow-handicapped citizens on a regular basis.*

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*It should be noted that Citizens Band over-the air radio communication provides the equivalent of conference calling; with the ever-increasing demand for over the air frequencies for industrial use, it is not likely that CB is a reasonable alternative to plan on.

There is one other use of cable video for communities of persons needing a particular social service. This is the "video magazine" concept which has been proposed in various forms by observers of cable communications. Every "community" of more than few hundred or so members living in different parts of an area might be served by a program designed in a journalistic format. Its content would include extensive inserts of half-inch video taped profile-interviews with members of the community, news about the socio-political environment of the community, and information about service, resources and events of interest to its members.

Let us take a look at some of the ways cable might be used by people having need for special services.

The men and women needing job training and placement service from the public sector are almost all poor. While dislocation in the economy can cause temporary unemployment of the skilled worker and professional, they finally can enter an employment-seeking system -- private placement agencies, newspapers, professional associations, friends. The poor person seeking work has a complex of obstacles before him, in addition to not being able to enter the private employment system.

The Unemployed and the Underemployed

There have been numerous attempts in the past to make use of radio and television to advertise jobs listed by the U.S. Employment Service. The "Opportunity Line" programs which have been produced by commercial television have been successful in several cities. Unfortunately, the statistics maintained by the television stations indicate only the number of telephone inquiries stimulated by the programs; there is no indication of what proportion of callers actually obtain jobs. The principal disadvantage of the existing types of programs is that they are not part of a system to provide training and placement.

One of the few attempts to integrate television programs with an employment system is the noted "Job Man Caravan" program which is addressing the employment needs of blacks in South Carolina. Imaginatively conceived, and well executed, the program presents descriptions of jobs, depicts the prospective work situation to some extent, and by virtue of the promotional zeal of its producers, it has actually stimulated the creation of jobs.

Cable television offers the possibility of presenting daily programs of this nature, advertising job openings, and, perhaps, more important job training and job counseling services. If the program is linked directly to the U.S. Employment Service, or its local delegate, and if the producer of the program has as his mission to actually get unemployed men to work (as opposed to general listing of jobs) there is a reasonable chance of the concept of becoming

a powerful means for getting unemployed men and women into the employment situation, and providing opportunities for continuing skill development and upward mobility. As we noted earlier, cable television by itself is not going to solve the unemployment problem. However, since a substantial part of the problem is that a man without work does not know what is available to him, and does not have the reinforcement of peers and personally interested helpers -- which television can simulate -- it appears that cable offers a significant opportunity in this area.

While there are many other potential uses of cable communication -- including two-way communication between unemployed persons at different parts of the city, and with counsellors, -- there is one other specific application which may be a powerful tool.

In urban areas there is a dearth of opportunities for unemployed and under-employed persons to receive training and skills that are relevant to the local job markets. The author designed a program for use in Puerto Rico which illustrates one potential use of cable television in job training. The essence of the concept is to produce a series of television programs, broken into fairly small units and shown two or three times a week. Viewers can request a correspondence kit containing text and tests to accompany the program. Neither of these ideas is, by itself original. The linking of the two media -- television and correspondence course-with a third medium may offer success where previous attempts have failed. The third link in the training system is a Saturday morning learn-by-doing experience at

a vocational school or contract-operated training center in the community. The learn-by-doing element of the system is essential for some types of training (automobile mechanics), and the experience of learning with others can be a powerful motivating force.

Finally, a combination of video cassette and cable available at either home or at neighborhood Service Centers, together with telephone or two-way video access to training counsellors would enable a man to continue to develop knowledge about his field of interest, and to prepare himself for advancement.

Early Childhood Development

There is a close link between the need for job placement and training and early child development. Numerous studies have indicated that a substantial number of mothers of young children -- heads of households -- would welcome the opportunity to work rather than to receive public assistance. There is a tremendous shortage of day care facilities to meet the needs of these mothers. Public policy, expressed in several recent Congressional actions, and others pending, would vastly increase the day care resources of the country. Virtually all proponents of day care are in agreement that two principles should guide the development of day care centers in the future. First is that they should be truly comprehensive developmental centers -- not simply custodial care facilities -- and that parents should be deeply involved in the management of the centers. The dual trends towards rapid expansion of the day care system, and emphasis upon local control presents a severe problem in establishing curricula, standards,

and providing staff training. Sesame Street has demonstrated the tremendous value of television as a learning aid. Cable presents the opportunity of presenting several hours a day of programming intended for viewing by the children and staffs. All of it need not be of the professional quality of Sesame Street. Programs which simply illustrate what the childrens' local community is like, and programs which introduce children from one center to those in another could be useful ways of extending the horizons of youngsters.

Critics of children's television often point to the attitude of passivity which television can engender in children -- robbing them of the experience of interacting with one another as well as with information which is presented. It is possible that centers be equipped with two-way video capability so that children could interact with a remote teacher or entertainer, or with children in another center. At a more simple level, through use of digital terminals, children in a center could, once in a while, individually and/or collectively interact with the material being presented from a central point by responding to questions, playing games, or "voting" to select successive material to be shown.

Children's programming of this nature would also be of use to mothers having children at home, and could be extremely useful in the system of so-called family day care. Family day care implies that one mother -- licensed by the city -- takes care of 4 to 6 children of neighbors during the day so that their mothers can work. A unit of cablecast programming presented late in the afternoon,

for example, could suggest activities which the mother-provider could consider for the children in her charge for the next day, including meals, use of aids, and the preview of the succeeding days program.

The Chronically Ill, Handicapped, and Elderly

Whether living alone, with one's family, or an institution, the life of the person who does not have ordinary freedom of mobility has some of the debilitating features of sensory deprivation. Earlier it was suggested that telephone conference calls -- either by telephone or by the cable-return link-can provide those persons with a chance to communicate with others sharing their problems and interests, as well as with people from the outside world. Video magazines and special events, inexpensively produced by volunteer or public social service agencies can be means of providing a window on the world for those afflicted.

In addition to these types of services, which, in fact, could be provided today were it not for the cost of video transmission and telephone conference-calling, there is a set of services which can be provided by cable, which are going to be a unique contribution of cable. They are best illustrated in the case of the blind person.

From a functional point of view (ignoring aesthetics) the blind person suffers the most from lack of access of the printed word and pictorial information, and he suffers tremendous limitation in mobility.

In 1966, the author led a small group of engineers and blind rehabilitation specialists in a series of experiments to test the

usefulness of substituting a closed-circuit television system for a sighted guide. It was demonstrated that a blind person holding a portable television camera before a printed page could have a remote sighted person read the material -- even newspaper print. The other experiments involved having the blind person equipped with a television camera prepare a mea in a unfamiliar surrounding, extinguish a fire, and negotiate a very difficult and sensorially confusing mobility task. The experiments were highly successful. A proposal to the American Telephone and Telegraph Company to support further experimentation with the concept, with a view to determining how many blind persons currently unemployed might find work, was unfortunately, not funded. The proposal was based upon use of picture phone technology, and was considered to be prohibitively expensive.

With the advent of two-way cable, it is conceivable that a large number of blind persons' homes, and work places could be equipped with television cameras feeding to local head-ons. Sighted "controllers" at a central point would monitor the pictures being received by the cameras, and communicate with the blind persons to provide whatever visual data was sought. Until the number of feed-back channels is substantially increased, it is not reasonable to imagine that every blind person could have a remote sighted aid available at all times -- even though the remote sighted aides can time share their attention among as many as six to ten blind persons. Even with a limited number of feed-back paths, and therefore,

limited access by any single blind person to his "controller," procedures could be arranged to schedule certain minutes or hours of a day which an individual blind person would have available.

When the number of feed-back channels becomes very large, or when techniques of slow-scan, and multiplexing have become commonly used, it is possible to conceive of a blind person carrying a hand-held camera and transmitter having a range of a mile or so. Its signal would be received by antennas located throughout the city which would feed through head-ends. With such a system blind persons would have been given a freedom which would be to them almost miraculous -- the ability to walk down the street knowing what is in front of them and what is around them, be able to read directional signs, and enjoy most of the benefits which vision provides for the rest of us.

One straight-forward service for those who are partially sighted would be a video-showing of a magnified daily newspaper -- analogous to the Large-Print edition of the New York Times. There are approximately ten times as many persons who have serious visual handicaps short of legal blindness as there are blind persons. Particularly among the aging (half of blind persons are over 65) access to the daily newspaper could be a tremendous boon.

Community and Social Action

Many others have considered the opportunities offered by cable television for community development. Applications range

from town and community board meetings (cablecast while in session) to programs modeled on the "Advocate" program in which local issues are debated and presented to viewers at home for their vote. As noted earlier, this same kind of approach can be extremely valuable for the non-geographic communities. Communities-of-interest such as the deaf persons, addicts undergoing rehabilitation, retired businessmen, et cetera, can be served by programs such as these.

Programming aimed at increasing community and social awareness can become a means to improve the extent and quality of social services. Voluntary social service agencies have become skillful in use of radio and television to describe their services, principally for the purpose of obtaining financial support and also to inform potential clients of what services are available. Too often these are characterized by the provider's point of view. Giving the consumers of social services access to the cable may lead to improvement in quality control, as well as increasing public support for the services.

Indeed a by-product of all of the social service cablecasting described above will be to inform the community at large of the kinds of needs which exist in the community, and provide an introduction to the resources which are available. In an indirect, nearly accidental way, this exposure to the public of the problems, and the strengths of individual fellow residents of the community, and of what private and public resources exist to try to help cannot but help create a better understanding and a greater support for services to those who need them.

Management Application

The manager of any social service organization is concerned about three main functions:

1. promotion, soliciting, accepting "customers" and helping to determine and classify their needs in terms of what's available.
2. for those needs which cannot be met by the organization itself, making arrangements to connect the potential user with the appropriate provider, following up the subsequent interaction with provider, advocating, pressing (if appropriate) until a best-possible solution can be arranged.
3. actually delivering a service, working to solve a problem. It may be the operation of a day care center, a family counseling session or helping a community to organize itself to better its environment (prevention social service) or develop indigenous resources.

Social services transactions in any of these areas are characterized by a tremendous amount of paperwork, form filling and delays, and mistaken attendant thereto. Cable can be a way of improving management accountability and resource allocation using data channels, computer storage of case data, and automatic follow-up. It must be remembered, however, that social service agencies --

perhaps more than other professional service -- are person-oriented, rather than oriented toward specific results. Most of the services are "soft." (How much is "enough" counseling to a disturbed homeless youth?) The introduction of cable and computers in somewhat analagous business institution -- banking and insurance, for example -- is a much easier job. Nevertheless, the availablity of cable to speed case data from one service provider to another, administrative "tickling" for followup, rapid accumulation and analysis of service related data, allowing users and manager to see live or taped views of actual delivery situations at a distance can be a great boon, if only to allow clients to be matched with services faster, and to give managers the basis upon which to ask more insightful questions.

This may lead to the more rapid introduction of the concept of performance accountability into social service, as it is entering the fields of education and health. It can lead to this if some experimental demonstration projects are undertaken large enough to expose difficulties, and to demonstrate the most proper way to go about it.

The personnel structure of the total system -- public and private -- can change markedly. At the headquarters, there would be a small group of management and research specialists, together with a staff of specialist consultants available to be on television to give advice to the local staffs at the Centers (and to clients and groups of clients on occasion).

The intake function, and the day-to-day operation of service delivery center style will be highly decentralized, each operating in a style dictated by its local "market" and its consumer representatives. By means of regularly scheduled sessions (in addition to ad hoc special problem consultation) the staff case worker will be assisted and supervised by remote supervisors. Staffs of the Service Centers intake points and service delivery units will have much greater numbers of para-professional workers (from the community) and volunteers then are now common. They will have available a far better and more efficient type of training then exists now.

Conceptually, a de-centralized, technology-based training approach would emphasize:

1. The employee and his supervisor, with the counsel of the professional training staff, determining training needs in light of job requirements, and considering available video and other training material from the central unit.
2. Presentation of this material, either at the command of the individual employee, or, if the economics of the situations do not permit this, presentation by TV or radio at a time during the work day when several other, or several hundred other co-learners in other offices are receiving the instruction.

3. Self-pacing and testing, with "coaching" available in as near-simulation as possible of the conventional teacher-class situation. This implies adopting some of the reomte-teaching techniques of correspondence schools, but making extensive use of telephone rather than mail.

Finally, the professional social worker will be able to be more professional through continuing education (like doctors) by means of national and regional professional video journals, and by open-university courses given by cable or a combination of cable and cassettes. The professional social worker will be more, rather than less able to address his talent and energies to eliminating the causes ofthe problems which lead to need for social services, and will be more free to deal on a person-to-person basis (even though by remote video) rather then committing his attention to the minutia which now occupies so much of his time.

The Economics of Social Service Delivery by Cable

What is the pay-off of all this? First there will be a qualitative change, as described above. The quality of life of those who need service (those who need continuing support, like the home-bound disabled) and those who use help only occasionally -- a traumatic dislocation in the family, for example -- will get

the help they need, faster, more appropriately, and of better quality.

Can their be an economic payoff as well? Let us consider the magnitude of the system we are discussing. Our hypothetical metropolitan area of one million population is spending roughly the following amounts of money in "helping" services, through public and private institutions:

Education (through high school) -- $150 million per year

Health Care -- $175 million per year

and

Social Services -- $50 million per year

Can we make a substantial effect in the costs of these social services, or slow their rate of annual increase? The general strategy, ignoring humanitarian considerations, is to do those things by means of cable which will:

Eliminate the need for a person to call for social service, or replace a high-cost type of service with a lower cost one, or have the service provided in a shorter period of time.

Enable a person who is now receiving publicly provided income maintenance financial aid to raise his income and lessen the need for public aid, and to enhance the probability of his beginning to generate tax revenue instead of absorbing it.

What tactics are available?

Provide for preventive social services (such as drug abuse education to the population of potential addicts).

Arrange that high-leverage services are delivered faster and more intensively (for example, job training and re-training together with job-holding support services, and expediting the job-placement process.)

Detecting problems early, before they cause situations which will absorb costly services (like early counseling in a troubled marriage).

Keep people in the community, out of institutions, by enabling and motivating more self-care (it costs at least $10,000 per year for an old person to live in an institution -- compared with something on the order of $5000 a year in public assistance and aids to support him living with his family, or alone in the community.)

Given the general strategy, and the tactics suggested, what are the uses of cable and VTR, and accompanying sound service re-design which would be most cost/effective? The question is moot -- there is simply no empirical evidence. We don't even know how to rationally allocate the social service budget among the services as they now exist. From the point of view of total social benefits, should we spend half the total metropolitan area budget on child-related services -- one quarter? -- one tenth?

Perhaps the best way to start is to examine the costs of performing certain types of services today --manpower training,

for example, or services for the elderly -- and see how (or whether) a cable-based social service communication system could markedly reduce cost with a reasonable chance of delivering at least the same quality of service. Then calculate the probable capital and operation cost of systems (hardware, programming, personal services, et cetera) to do those jobs. If this looks economically attractive, then consider what other services could be grafted on at marginal costs that meet acceptable costs/ benefit criteria.

Estimating the investment and operating cost of a social service communication system would be only guesswork at this time. The costs will be highly dependent upon the configuration of the cable system of the area. Other public and private interests will have their use for distributed head-ends, for data channels, and for computer capability. If the general cable system has the features and information carrying capacity noted earlier, the costs which the social service agencies of the area will be assuming will be principally in the areas of program production, and in aiding personnel having professional skills not found in social services today.

Media specialists will be needed to aid in setting standards and in counseling users in the best media to use in delivering a particular type of service. Engineers must be available to assemble the needed technical aids (such as those needed to allow disabled persons tolive alone with cable surveillance). Finally,

there will be the scheduler, a dispatcher responsible for arranging channel time and for providing access to central library video recordings.

Even if analyses and experiments provide favorable findings regarding the usefulness of cable communication in social service, its acceptance will be hard-won.

Users of social services -- especially the poor -- have a skepticism about "gimmicks." The privacy of a person seeking help is terribly important to him, and the notion of a remote computer can be disturbing.*

The social work profession is deeply committed to the need for personal sympathy, understanding and insight in dealing with personal, family and social problems. The profession is, by and large, unfamiliar with technology, and many can be expected to be threatened by a system which not only may appear to be de-personalizing, but may portend obselescence of some of his skills.

A host of taxpayers are doubtful about the need for social services anyway ("I'm able to solve my own problems, why can't they!"), and a substantial investment in what may appear to be a flashier way to give away tax money may arouse resentment.

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*Through a variety of computer programming "pass word" techniques available even today, details of services given by other providers can be kept secret, although anonymous abstracts may be recorded for various types of analyses directed toward evaluation of effectiveness of service given, and analysis of needs.

This does not exhaust the possibility for argument against investing in a cable-based social service communication system. There are legitimate bases for these expressions of opposition, and others, and they must be honestly faced by those planning to link cable and social services. Careful pre-design analysis and ruthless evaluation must characterize every step in implementing concepts such as those suggested in this paper.

Issues to be Addressed

The nature of this discussion has been speculative. There is simply not enough experience anywhere in the use of telecommunications as an integral part of a social service system to permit empirically-based extrapolation. Before a fully operative social service cable system becomes a reality, a number of fundemental issues and qquestions must be addressed. Some are susceptible of analysis based upon application of communication technology in other situations. Most, however, require very careful study and experimental research--on a fairly large scale over a period of a year or more--before their findings can be a basis of subsystem and system changes. Several questions are critical:

1. Even given very large channel capacity, the social services are only one set of "helping" activities which can benefit from access to the cable from the point of view of the total community. How to allocate channel resources among social services, health services, and educational services--not to mention the other public services which will need

cable access for city-to-citizen communication and for internal management such as public safety and environmental protection?

2. How to introduce the "teleservice" concept without creating a demand for service which exceeds capacity even more than now?
3. How to introduce the cable and the professional social worker to one another least abrasively?
4. How to best develop the software (including real-time access to remote specialists) which will make local, regional and national resources available to the person seeking help?
5. How to involve the community (geographical and communities of interest) in planning, carrying out, and monitoring use of the system?
6. How to inform and motivate potential beneficiaries to use of the system?
7. How to develop consumer survey procedures which will be as useful to social service providers as audience survey techniques are to commercial media merchandisers?
8. How to guarantee privacy to those who are served by the social service cable system?
9. How (and whether) to involve commercial sponsors to whom certain groups of social service users represent attractive markets for their product or service?

10. How best to get from now to then--from labor-intensive, minimal technology social service delivery systems to the systems and services envisioned in this paper?